FTR Forfeiture Rule Background

April 2019

NEXTera ENERGY RESOURCES

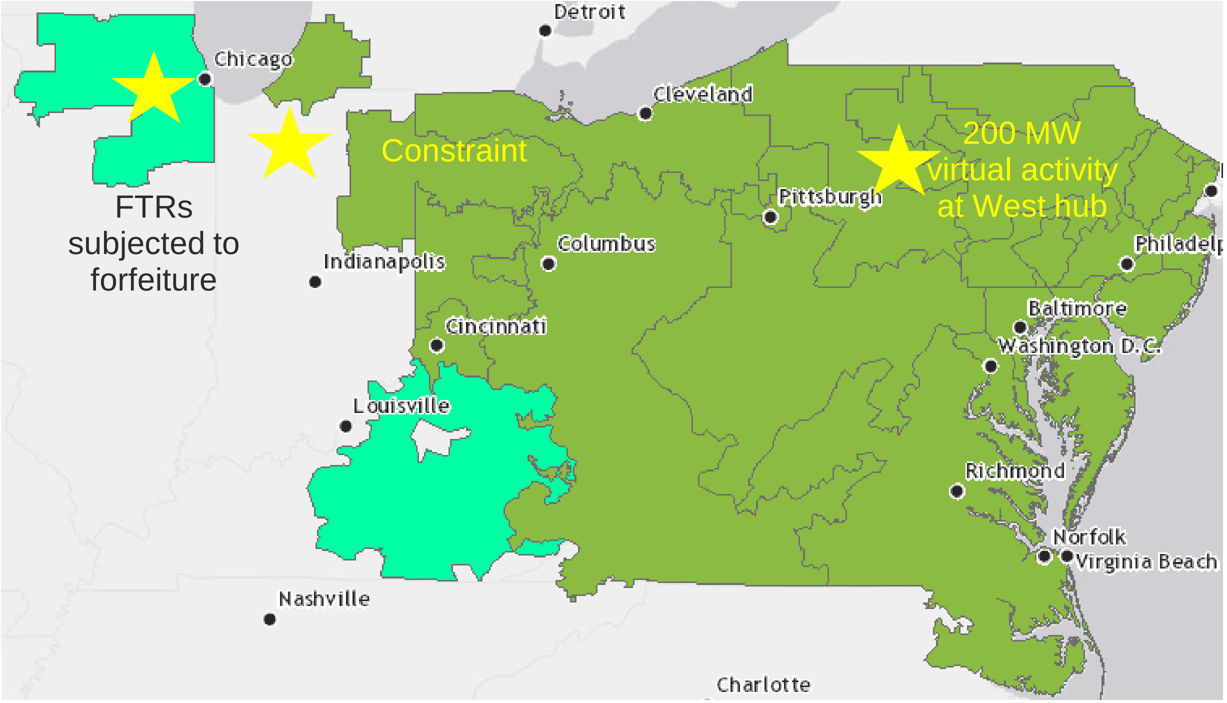
Exelon.

Problem from Our Perspective

The FTR Forfeiture Rule is deterring use of virtuals aimed at creating congestion that benefits FTR positions, but over-mitigation is foreclosing legitimate activity

- Competitive suppliers may use FTRs to manage congestion risk
- Competitive suppliers may use incs/dec to manage load risk

Several market participants have concerns that the rule is too restrictive and prohibits the usage of both products



Market Impacts of Current Rule

An overly restrictive FTR Forfeiture Rule can hurt customers

- Competitive suppliers may assess additional risk premiums that may be charged to customers

Price to Serve Customer with **Moderate** FTR Forfeiture Rule

Energy $35/MWh at West Hub

Price to Serve Customer with **Overly Restrictive** FTR Forfeiture Rule

Risk Premium of $.25/MWh

Energy $35/MWh at West Hub

- Reduced value of ARRs if market participants bid less for FTRs as a result of increased forfeiture risk

ARR Revenue with **Moderate** FTR Forfeiture Rule

ARR Revenue, $3/MWh

ARR Revenue with **Overly Restrictive** FTR Forfeiture Rule

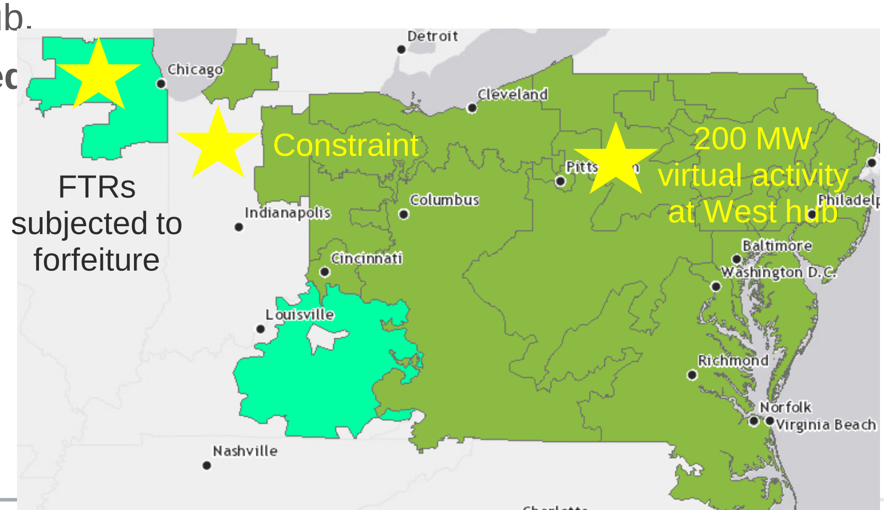
ARR Revenue, $2.50/MWh

Exelon Example – September 21, 2017 @ 19:00 EDT

Event Facts:

- 200 MW virtual trade at West Hub. Exelon was serving about 12,000 MWs of load across PJM at this time
- The constraint was on the Roxana – Praxair 138 kV line (PJM-MISO M2M Flowgate, NIPSCO) for loss of the Wilton Center – Dumont 765 kV line (ComEd/AEP tie line)
    - Roxana – Praxair line rating is 158 MVA. PJM's share of FFE was -37 MWs
- For purpose of the virtual test, **3.7 MWs** would be the threshold (10% of DA constraint limit)
- The 200 MW virtual trade created more than 3.7 MWs of additional flow on constraint, so it passed to the penny test
- The 200 MW virtual trade increased the target allocations on multiple FTR paths by **$.01.**
- Exelon FTRs that were subject to forfeiture included: Lasalle 1 to ComEd, Lasalle 1 to NI hub, Lasalle 2 to ComEd, Lasalle 2 to NI hub, Dresden 2 to NI hub, Dresden 3 to NI hub, Braidwood 1 to NI hub, Braidwood 2 to NI hub, Quad 2 to ComEd, Quad 2 to NI hub, Quad 1 to ComEd, Quad 1 to NI hub, Byron 1 to ComEd, Byron 1 to NI hub, Byron 2 to NI Hub, Byron 2 to ComEd, AD Hub to AEP Zone, and West Hub to NI Hub.

Total Revenues Forfeite

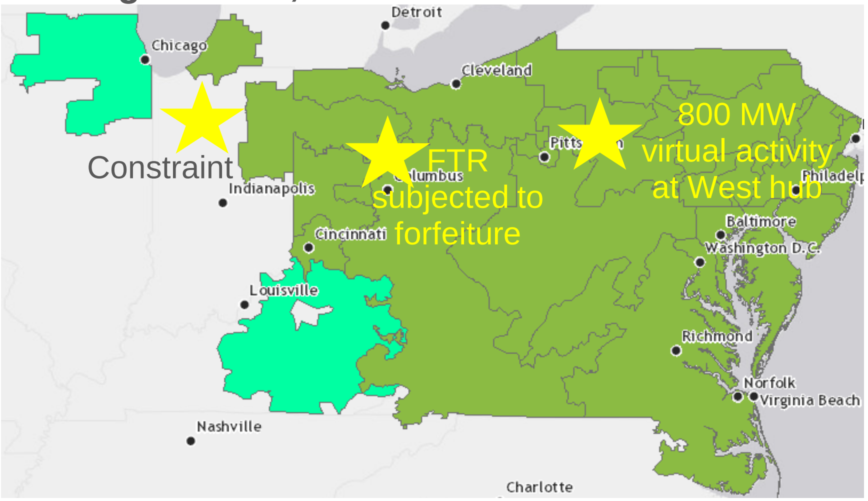


NextEra Example – September 27, 2017 @ 14:00 EDT

Event Facts:

- 800 MW virtual trade at West Hub. NextEra was serving more than 5,000 MW of load across PJM
- The constraint was on the Roxana – Praxair 138 kV line (PJM-MISO M2M Flowgate, NIPSCO) for loss of the Wilton Center – Dumont 765 kV line (ComEd/AEP tie line)
    - Roxana – Praxair line rating is 158 MVA. PJM's share of FFE was 71 MWs
- For purpose of the virtual test, **7.1 MWs** would be the threshold (10% of DA constraint limit)
- The 800 MW virtual trade created more than 7.1 MWs of additional flow on constraint, so it passed to the penny test
- The 800 MW virtual trade increased the target allocations on AEP-DAYTON Hub to DAY FTR paths by **$.01.**

Total Revenues Forfeited During Hour $2,078



Exelon/NextEra/VECO Proposal – Package B, Main Motion

85% of market participants supported Package B at the MIC

Design Components	Status Quo	Package A Modifications	Package B Modifications	Reasoning
Virtual Test - M2M Constraints (FFE)	Affiliate net virtual flow >= 10% of DA constraint binding limit	Affiliate net virtual flow >= 10% of DA constraint binding limit, including loop flow impacts	Affiliate net virtual flow >= 10% of DA constraint binding limit, including loop flow impacts	Remove inconsistency between how coordinated market-to-market flow gates are handled by the FTR Forfeiture Rule versus internal constraints
FTR Impact Test - Internal PJM Constraints	Constraint has at least 0.01$ impact on FTR path value	Status Quo	FTR flows greater than or equal to 10% across constraint	$0.01 impact test is overly punitive; not clearly ordered by FERC directive
FTR Impact Test - M2M Constraints (FFE)	Constraint has at least 0.01$ impact on FTR path value	Status Quo	FTR flows greater than or equal to 10% across constraint	$0.01 impact test is overly punitive; not clearly ordered by FERC directive
Implementation	N/A	Q1 2019	Q1 2019	N/A

Detailed Rationale for Main Motion

In the January 19, 2017 Order in Docket EL14-37-000 (paragraph 33), the Commission clarified that "We have concluded that the use of virtual transactions with the **intent** to benefit FTR positions constitutes cross-product manipulation."

The Commission asked for (paragraph 62):

"Based upon the foregoing, we direct PJM to submit a compliance filing within 90 days of this order to modify section 5.2.1 (C) of its Tariff to:

1. Evaluate the net impact of a market participant's entire portfolio of virtual transactions on its FTR positions;
2. Measure the portfolio's net impact using the load-weighted reference bus;
3. Revise the threshold for triggering forfeiture to reflect the previous two changes; and
4. Consider all virtual transactions held by entities that share common ownership as part of the same portfolio."

The 10% threshold in the FTR impact test in the main motion was the previous threshold for the FTR impact test before the rule was revised in 2017 and is consistent with the threshold in the virtual test.

The Exelon/NextEra/VECO package is an alternative and improved way to meet the Commission's defined objectives without restricting legitimate business activity.

Proposed Alternative with 5% Threshold

Sponsors have been requested to consider lowering the threshold from 10% to 5%. 5% is often used in other areas of PJM.

1. In real time contingency operations, PJM will initiate off cost (constraint control) if reasonable controlling actions are available with an impact effect generally greater than 5%.
2. In PJM's load deliverability analysis tests for CETO/CETL, any overloaded facility whose dfax>= 5% is considered a violation.
3. A 5% dfax threshold is used as part of the constraint identification and cost allocation for New Service Customers.

PJM ran some analysis on this option:

September 2017 analysis

Status Quo Forfeited Dollars: $2,001,261

10% Scenario: $6,310

5% Scenario: $9,727

If this change would enable a 205 filing on this issue, the sponsors would make this concession.